Supplementary Figure S1. Impact of intrinsic binding affinity on apparent affinity. The ratio of Fab K_D/IgG K_D is indicated for the nine antibodies shown in Table 1. The greatest increase in apparent affinity occurs with Fab of intermediate affinity.

Supplementary Figure S2. Cell-binding experiments for high affinity EGFR antibodies do not reach equilibrium. Depicted for low affinity C10 IgG (a) and high affinity 2224 IgG (b) are experimental cell-surface binding data along with corresponding model-simulated binding curves for the experimental incubation time (16 hours) and a hypothetical time sufficient to assure binding equilibrium (10000 hours). The two simulation curves overlap for C10 IgG, indicating that the experiment was run under equilibrium conditions. However, simulations indicate that 2224 IgG would demonstrate a higher functional affinity with longer incubation times on cells.